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Labor INFORMATION BULLETIN

APRIL 1942

Business Profits in 1941

Full Employment After the War

Women's Role in War Production

Cost of Living in March

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS · WASHINGTON

Labor INFORMATION BULLETIN

BORIS STERN
Editor

UNITED STATES DEPARTMENT OF LABOR
FRANCES PERKINS, Secretary

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Women's Role in War Production

MARY ANDERSON, Director

Women's Bureau, United States Department of Labor

The unprecedented demand for a large army of several million men and for greater and greater output of war materials of all descriptions is inevitably bound to tax the Nation's reserves of manpower and womanpower to the utmost. Successful fulfillment of the victory program launched by this country will require, in addition to the men and women normally a part of the labor force, large numbers of new workers for the expanding war industries and for maintaining a high level of output in essential civilian industries. As more and more men are drawn into the fighting forces of the Nation, a very large proportion of these new workers will have to be drawn from the ranks of American women.

Many girls and women not now employed in the industrial field can help supply this urgent need for workers without seriously disrupting the home and normal family life. The Women's Bureau estimates that nearly 6 million women can be recruited this year for work in war industries and other essential services. Women workers released from converted and curtailed consumer goods industries and the approximately 1 million unemployed women who have registered with public employment agencies should be absorbed first. About 2 million workers can be drawn from among the approximately 16,500,000 women in the 18–44 age group who are now engaged in their own housework. In addition, the nearly 700,000 girls and young women up to 24 years of age who are now still attending school will also be available for employment within the next few months. In some sections of the country, particularly in the agricultural and mountain States, the opportunities of these young women for gainful employment under normal conditions are restricted, and this group thus provides another substantial reservoir to be drawn upon by the many new war industries which are springing up relatively near their homes.

In many instances, these women will enter industries in which women are already employed or have previously been employed, either in times of peace or in times of war. In such large peacetime industries as the garment trades and electrical manufacturing, for example, women already have made large contributions to the war effort. They have taken over in large part the manufacture of clothing for soldiers and sailors, the sewing of parachutes, and production of bags for explosives. They are likewise extensively employed in the highly important electrical equipment and apparatus industry, winding armatures and coils and assembling small radios, switchboards, and electrical instruments of all kinds.

In the strictly wartime industries, women established an equally enviable record during the first World War. This was done without the aid of extensive vocational training, such as exists today. Women went into iron and steel mills and foundries and machine shops and learned how to work with metals on the job, often under adverse conditions. They set up the lathes, drills, and presses on which they were working. They helped to produce high explosives and shrapnel shells, cartridges and hand grenades, machine guns and rifles, as well as a multitude of other war products.

More than half of the employees in shell-loading plants and about one-fourth of those employed in airplane manufacturing during the first World War were women. Four-fifths of the firms in the metal industries employing substantial numbers of women reported after the war that the work performed by women was at least as satisfactory as, and in some cases more satisfactory than, similar jobs performed by men.

Once the current unemployment and dislocation of employment caused by extensive conversion of civilian industries into war production are overcome, total industrial employment in the United States is bound to rise rapidly. It is

estimated that 6 million men from converted and curtailed industries and approximately 2 million qualified unemployed men will be absorbed into the war labor force by the end of 1942. As this absorption progresses, the need for larger and larger numbers of women will become urgent.

The fact that women may not be needed in great numbers at once offers a splendid opportunity to prepare and train many women for their effective use in the manufacture of military supplies 6 months or a year hence. A realistic and immediate program to train women for war jobs is vitally important to the ultimate success of the war effort. Recognizing this fact, the Labor Division of the War Production Board declared in February of this year:

> In view of the increasing shortages of male workers and the increasing demand for the employment of women throughout the country in a wide range of occupations, the Labor Division of the War Production Board has announced the policy that the employment of women shall be facilitated to meet the needs of the war program. This necessitates the immediate extension of defense training to women on a basis of equality with the training of men.
>
> In referring women to defense training courses, the same policies that govern the referral of men should be followed, that is, they should be selected on the basis of qualification for the occupations in which training is offered, due consideration being given to the physical requirements of the occupations.

Prior to this order, women were not admitted to training courses unless their employment in specific defense industries was reasonably assured. This had the effect of limiting the supply of trained women to the expressed demand for such workers. In other words, women were not trained until management was sold on the idea of their usefulness. In all too many instances the usefulness of women could not be clearly shown because they were not being given the opportunity to demonstrate their abilities.

WHAT WOMEN CAN DO

What jobs are women actually doing in industry, and what jobs can they be trained for? Aside from the more or less traditional opposition to the employment of women in industry, which unfortunately still prevails in some quarters, women can, subject to certain limitations, perform a wide variety of jobs in war industries. These limitations are:

1. Women average in general about one-half the average man's lifting strength and about two-thirds of the average man's pulling strength.
2. They are more susceptible to dermatitis and certain other health hazards in the presence of specific chemicals.
3. They usually lack the basic mechanical knowledge and familiarity in the handling of tools and in working with metals and wood. This deficiency can be corrected by proper training and adequate experience.

On the other hand, women possess certain characteristics, both physical and mental, which are definite assets on many types of work. They adapt themselves easily to tedious and often monotonous work requiring alertness and patience as well as keen eyesight and flexible fingers. They are able to make careful adjustments at high speed. Many women also have the ability to work to precise tolerances.

Women are now used extensively, and their numbers could be increased with short periods of training on the job in such manipulative skills as the operation of drill presses; all types of light subassembly and final assembly requiring the use of hand tools (pliers, mallets, screw drivers, files, electric drills, bench assembly machines and riveting presses); electrical work including wiring and assembling parts, winding coils and armatures, soldering and taping; painting processes such as touch up and hand finishing, and stenciling.

In a number of other manipulative skills where women are now used to some extent, their numbers could be increased after short training periods and upgrading from other jobs. These occupations include the operation of milling machines (light and micro machines); light punch and forming presses; bench and watchmakers' lathes; burring, polishing, lapping and buffing on lathes; hand finishing machined parts by filing, burring and lapping; spot welding; soldering; and spray painting small parts and products.

In certain manipulative skills women are now used only to a slight extent, but they could be employed readily after preemployment and supplementary training such as that now offered men. These skills cover the operation of light-duty hand and automatic screw machines; light turret lathes; sheet metal forming and riveting, acetylene and torch welding, and electric arc welding.

Related skills, such as blueprint reading and use of gages, micrometers, and calipers; calibrating, checking and testing raw materials, stock, and salvage parts, are included along with the more skilled manipulative jobs. Now these occupations provide employment for few women, but they offer wide possibilities after preemployment and supplementary training.

After training, women could also be employed effectively in such factory services as production planning, routing, and control; tracing; drafting; tool-crib and store tending and dispatching; timekeeping; and factory office work. Supervising and training other women, as well as personnel administration, are additional occupations for which women might be trained.

WORK IN WAR INDUSTRIES

Almost simultaneously with the beginning of the national defense program, the Women's Bureau began to make occupational analyses of all operations in important defense industries. To date, the Bureau has studied the work that women are performing and can perform in four key war industries, namely, those producing ammunition for small arms, ammunition for artillery, aircraft assembly, and precision instruments.

The largest number of women workers were found in plants manufacturing ammunition for small arms and for artillery. In 30 plants (including 2 not yet fully completed) over 40,000 women were employed, and it was estimated that by late summer at least 70,000 women would be on the pay rolls of these establishments. The proportion of women varied greatly from plant to plant, ranging from as little as 7 to as high as 83 percent of the total force.

Small Arms Ammunition.—The small arms ammunition industry manufactures a standardized product, which requires much attention to the details of production—a type of work to which women are easily adapted. Women exclusively are now employed in a number of operations such as case tapering and shellacking strips for primer foiling. They could take over the entire operation of cartridge assembly loading machines; visual, gage, and machine inspection; bullet assembly, and a number of other important functions.

One small arms ammunition plant, which now employs 900 women, is in the process of expansion and expects to employ over 10,000 women by midsummer. This plant intends to hire women on every type of job where the work is not too heavy, and it is estimated that women may comprise 40 to 50 percent of the labor force. Women are to be trained in the use of lathes, drill presses, and milling machines. They will receive preliminary instruction in the plant's own training school, and will complete their courses while on the job under the supervision of foremen and experienced workers. No upgrading for women is planned at present, except for those who may become supervisors or inspectors.

In another case, a large Government arsenal, in greatly expanding its labor force, has added substantial numbers of women. Although these instances reflect substantial progress in the employment of women, they do not indicate the full extent to which women can be used in small ammunition works. The case of a British arsenal which produces generally similar products and which has four women on its pay roll for every man may be cited as proof of the extent to which women can be utilized on this type of work.

Artillery Ammunition.—In the manufacture of artillery ammunition, the various parts, such as shell forgings, fuses, primers, etc., are manufactured in different sections of the country and are shipped to Government arsenals or shell-loading plants for final assembly and loading. The Women's Bureau estimates that women can efficiently carry on two-thirds to three-fourths of the operations involved in the manufacture of the various parts, as well as over half of the assembly operations.

In the fuse department, for example, women can take over most of the machine operations and also the assembly, inspection, and loading and packing of the fuses. An illustration of the extent to which women have been substituted for men in this type of production is found in the changes made in the mechanical time fuse department of a Government arsenal. Three years ago 98 percent of the force were men, but today the proportions are reversed, and 96 percent of the workers are women. These startling changes in personnel were aided by the introduction of large-scale mass-production techniques. Women were found to be much better adapted than men to the handling of small parts, and they were also better able to concentrate on work which requires considerable dexterity and patience. At the present time this arsenal is producing fuses at a greater rate per employee than ever before.

Aircraft.—The assembly of all types of aircraft provides vast new employment opportunities for women workers. The materials from which airplanes are built are light in weight. Their framework is constructed from thousands of small parts and pieces. There is therefore no department in the aircraft industry in which women cannot be employed to advantage. They work not only in

the machine shop, on precision bench assembly, subassembly, in the electrical and radio departments, in the tooling division, and in the painting division, but are also assembling all parts of the fuselage until it is ready for the engine.

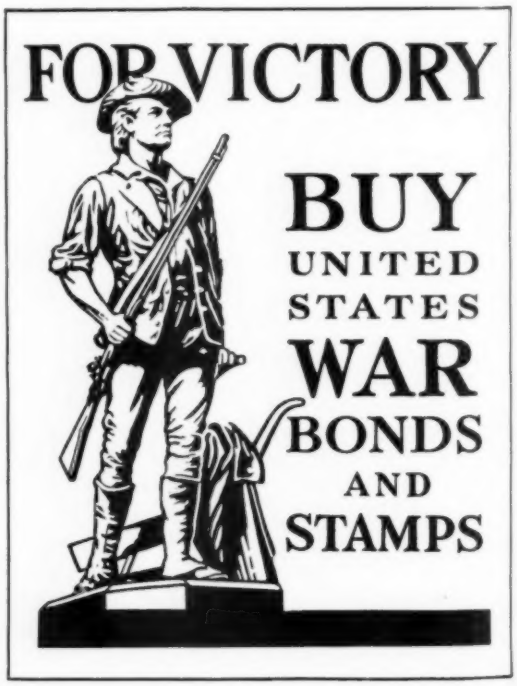
In contrast with small arms and munition plants, however, aircraft assembly factories have been reluctant to hire women except as necessity compelled them to search for new sources of labor supply. As late as January of this year, only about 6,000 women were employed in the aircraft assembly plants. Although the War Department recommended the employment of women in suitable occupations in aircraft plants as early as September 1941, it was not until after Pearl Harbor that the industry as a whole indicated a willingness to utilize women extensively. In several new plants now under construction, present plans call for an estimated employment of from 12,000 to 15,000 women in each. Another aircraft assembly plant expects to enlarge its present force of slightly more than 1,000 women to 10,000 by the end of the year.

Several aircraft plants which have been employing women for some time in the past indicate the wide range of activities women can perform if afforded the opportunity. In one of these plants, 500 women on the pay roll at the time representatives of the Women's Bureau visited the plant were being trained for skilled jobs and were taking courses in machine-shop operations, sheet metal work, blueprint reading, and inspection procedures. Many of these workers progressed from such simple jobs as filing burrs to the performance of much more complicated operations. Today women in the plant are not only employed on precision work in the machine shop and in the electrical and radio departments, but they are also assembling all parts of the fuselage until it is ready for the insertion of the engine. In another plant producing trainer planes, women saw, sand, and nail and glue together all the small wooden sections of the plane, and after the fabric is stretched over the wooden framework, they stitch the ribs and edges by hand. Women also install the radio and instrument boards.

Precision Instruments.—Unlike any previous war in history, this war demands huge quantities of precise and delicately constructed instruments vitally necessary for the accurate navigation of airplanes, ships, and submarines, and the accurate direction of gunfire, particularly in the case of antiaircraft batteries. It likewise calls for optical instruments, such as gunsights, periscopes, and binoculars, as well as for surgical and dental instruments of all kinds.

For many years the manufacture of precision instruments was carried out by skilled workers thoroughly familiar with all stages of production. The greatly increased demand for instruments, however, has resulted in the breaking down of the manufacturing process into a number of separate operations which require less all-round skill than was formerly needed. The present tendency to employ women on unskilled jobs only must therefore be abandoned. If given basic instruction in school and proper training within the factory, women can become skilled instrument workers, as shown by their work in many English factories.

In this country 17 factories in the East or Middle-West producing various types of instruments for military purposes were surveyed by the Women's Bureau. The number of women employed ranged from less than 10 to nearly 1,400 per plant, constituting from about 3 percent to almost 50 percent of the total labor force.



After the War—Full Employment*

Next perhaps to their determination to achieve a rapid and victorious end to the war, the American people are concerned with what is going to happen to business and employment conditions after the war. Business and farmers, wage earners, and professional employees alike fear a post-war industrial collapse, with millions of workers thrown into the street as a result of the demobilization of the Army and the shutdown of war industries. Many still recall the effects of World War I. They went through the brief boom of 1919, the sharp business decline of 1921, followed by the stock market speculation era of the twenties, and the business stagnation, unemployment, and misery of the thirties following the complete collapse in 1929. They are asking whether history will repeat itself, and whether we shall not be compelled to go through another era of economic stagnation and the suffering that comes with mass unemployment.

POST-WAR PLANNING

A recent pamphlet "After the War—Full Employment" by Alvin H. Hansen of the National Resources Planning Board, takes the position that with timely planning and with the effective cooperation of business, labor, farmers, and other economic groups with the Government this country need not necessarily repeat the horrible deflationary experiences of the last World War. We can avoid both a sharp boom in the months immediately following the war and forestall the long depression which generally comes after such a boom.

According to the National Resources Planning Board, the productive resources of this country will actually be on a considerably higher plane at the end of the war than when the war started. A larger proportion of our population will be trained to perform skilled or semiskilled jobs. The productive capacity of the machine industries will be greatly increased. There will therefore be the technical equipment, the trained and efficient labor, and the natural resources required to produce a substantially higher real income for civilian needs than ever achieved in the history of the United States.

With full employment and purchasing power maintained at a high level, private manufacturers, farmers, and wholesalers and retailers can and will supply the market with the goods demanded by the Nation. Private business can and will produce these goods at reasonable prices, provided full employment and the demand for goods can be sustained over a long period of time. It is therefore the responsibility of the Government in cooperation with business and labor to sustain such full employment and a constant demand for goods if a prolonged depression after the war is to be avoided.

WHAT MUST WE DO?

When the war is over, the Government cannot merely disband the several millions of soldiers to compete for jobs with the millions of other workers released from the factories and plants now engaged in the production of guns, airplanes, and other war equipment. The National Resources Planning Board takes the position that this country must develop a positive program to provide jobs either in private industry or on public projects to the workers who are to be released from the Army and war industries. Only such a constructive program can and will serve to invigorate private enterprise and induce manufacturers to operate at high output levels.

There is much that the Nation will need to produce after the war, partly to take up the slack in the production of consumers' goods caused by the present war effort and partly to help raise the standard of living for workers, farmers, and other economic groups. As the National Resources Planning Board states:

> We need improved manufacturing equipment to produce more and better goods at lower prices.
>
> We need to carry on extensive research in the laboratories of our great private corporations, in our universities, and in Government bureaus, to create new products and develop new processes.
>
> We need to rehabilitate and modernize our transportation system—by land, water, and air.
>
> We need continued advance in the techniques of production, distribution, and transportation; in short, in all those elements that enter into a higher standard of living.

Based on a report under the same title issued in January 1942 by the National Resources Planning Board, Washington, D. C.

We need to rebuild America—urban redevelopment projects, rural rehabilitation, low-cost housing, express highways, terminal facilities, electrification, flood control, reforestation. Many public developmental projects open fresh outlets for private investment.

We need a public health program, including expansion of hospital facilities.

We need a nutrition program.

We need higher educational standards in large sections of our country.

We need a program to improve and extend our cultural and recreational facilities.

We need an enrichment of the material and spiritual resources of our American way of life.

IT CAN BE DONE

Pearl Harbor has proved that the productive capacity of the country can be mobilized for war. With the exception of some unemployment or dislocation of employment caused by the complete conversion of a number of industries from civil to military production or by shortages of raw materials, the working population of the Nation is now fully employed in producing the airplanes, guns, and ships needed for the effective prosecution of the war. Indeed, the time is nearly here when not only a large proportion of women will be employed in factories and jobs producing war equipment, but we may even be confronted with a serious shortage of labor, both skilled and unskilled.

What must and is being done for war purposes can and must equally be achieved in times of peace. The only difference is that instead of devoting more than half of the Nation's energy and resources for war purposes, the Nation's productive effort will be concentrated on producing goods needed for civilian consumption.

Recent Trends in Factory Labor Turn-Over

In a time when every available worker must be fully employed and when every machine and piece of industrial equipment must be completely and effectively utilized in the war effort, it is of the utmost importance to eliminate or reduce to an absolute minimum the needless and wasteful movement of workers from job to job and from industry to industry. Such movement or "turn-over" of workers means lost time and lost production which can never be recovered. Often it also means lost wages for the men and women involved in the changes. Moreover, in many instances, this migration or turn-over of workers results, at least temporarily, in reduced efficiency and productivity, as workers require time and occasionally even additional training to adapt their skills to the operation of new or different machines and to familiarize themselves with plant processes and routine.

To follow the fluctuations and shifts in industrial employment, the Bureau of Labor Statistics for more than a decade has been collecting and analyzing each month reports on "labor turn-over" in a number of large manufacturing industries which employ on the average approximately 4 million workers. These surveys reveal, on the one hand, the rate at which new workers or rehired workers are added to industry pay rolls, and, on the other hand, the rate of separations from industry pay rolls caused by workers quitting their jobs, being laid off, discharged, or otherwise removed from the pay roll.

The tremendous expansion in industrial activity which has taken place in the last 2 years in the United States has completely reversed the trend in factory hirings and separations which prevailed during the economic depression of the early 1930's, when few workers quit their jobs and hundreds of thousands were either temporarily or permanently laid off. In recent months, lay-offs of workers, except in certain industries adversely affected by the war, have sharply declined. In contrast, the number of workers reported to have quit their jobs of their own volition—presumably to accept more attractive jobs in other plants or industries—has risen markedly. For example, averaged over the 12 months of 1941, about 20 out of every 1,000 employed factory wage earners voluntarily left their jobs. This was at a rate more than twice as great as the average for the preceding year or the period 1933–39.

Most of these workers sought and obtained employment in the rapidly expanding war industries, notably in shipyards, aircraft factories, and mills and shops producing other military goods and supplies. Thus, in the aircraft industry during 1941, the monthly accession rate, that is the number of workers added each month for every 1,000

on the job, averaged in excess of 100. In July the industry attained a peak rate of accession of 127. This compares with an average monthly hiring rate during 1937 of approximately 40 workers per 1,000 on the pay roll.

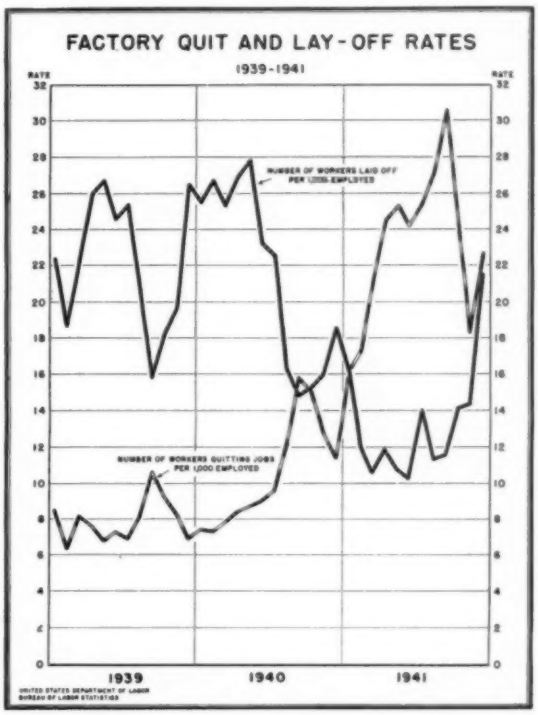
In the shipbuilding industry last year new workers were being added at the average rate of 140 per 1,000 employed. At one time during the year a peak rate of 182 was reached, as compared with a monthly average rate of hiring of 40 workers for each 1,000 employed in shipyards in 1937.

A special study of the Bureau of Labor Statistics to ascertain where a group of large shipyards on the Atlantic coast obtained their skilled workers revealed that during the first 6 months of 1941 almost one-quarter of the new workers hired were drawn from manufacturing industries, slightly more than one-quarter from the ranks of unemployed, and the remainder had been previously employed in a wide variety of jobs in nonmanufacturing industries or had been self-employed. Of those attracted from other factory jobs, some had left shipyards, ordnance establishments, or other essential war industries to obtain a more desirable war job.

Unless absolutely necessary to meet critical shortages of workers and unless properly directed by Government agencies, such as the Employment Service, this type of labor turn-over or migration from one important war industry to another represents a waste of manpower which must be avoided if maximum output of essential military goods is to be attained. The shipbuilding stabilization program drawn up last summer by shipbuilders, organized labor, and the Government provided some ways and means of meeting this difficulty in the shipbuilding industry. Among other objectives, this program calls for the payment of equitable and uniform rates of pay in the various shipbuilding centers. This practice serves to reduce the wasteful movement of workers from one shipyard to another in search of a higher rate of wages, as well as the equally wasteful practices by employers of "labor pirating." Such practices were particularly common in this industry during the first World War, when many employers offered special inducements for workers to quit their jobs in a rival shipyard and come and work for them.

To obtain a more detailed picture of the factors involved in the separation of workers from pay rolls, the Bureau of Labor Statistics classifies the total separations from the labor force into four groups—workers who voluntarily quit their jobs, those who are laid off, those discharged, and those separated for any other cause.

During the past year and a half, the "quit" rate has moved sharply upward, reflecting in large part the confidence of workers in their ability to improve their status by leaving their present job for one with brighter prospects, higher earnings, or more rapid advancement. Many of these jobs have been in war industries.



The lay-off of workers by employers, on the other hand, began to decline about the time the United States first announced its large-scale defense program. With the rising tide of industrial activity from the summer of 1940 to the autumn of 1941, the rate of lay-offs in manufacturing industries decreased sharply. Toward the end of last year, however, lay-offs again rose, due to a variety of factors. The most important of these were the curtailment of employment in industries producing certain kinds of consumer goods and in industries temporarily reducing or suspending operations pending the conversion of their plant facilities to the production of war materials.

Business Profits in 1941

On the whole, 1941 was the most profitable year in more than a decade in the annals of American industry and business. A sample of the earnings of 1,128 industrial, mercantile, and public utility companies compiled by the Federal Reserve Bank of New York indicates that the net profits of these companies, that is their profits last year after setting aside funds for the payment of normal and excess-profit taxes, totaled more than 3.7 billion dollars. This was an increase of 23 percent over the net profits of the identical companies in 1940. It was also a gain of about 30 percent over 1937, which for most industries had been the most profitable year of operation since the late 1920's.

Practically all of the corporation groups included in the study reported substantially higher net profits in 1941. Increases in net profits of 50 percent or more were recorded by the aircraft manufacturing, leather and shoe, petroleum, and railroad and ship transportation groups. The most outstanding of these gains were registered by the 137 class I railroads. Their combined 1941 net income was slightly more than $500,000,000, or two and one-half times as large as in 1940.

Other groups also reported substantial increases in net profits in 1941 over and above the large advances in profits recorded in the preceding year. The 112 companies manufacturing machine tools, agricultural implements, and other types of machinery included in the sample reported a 33-percent rise in profits, and the 54 iron and steel companies increased their combined net profits by 16 percent. The combined net profits of 13 large automobile manufacturing companies were 8 percent greater than in 1940, while 53 auto parts and accessories manufacturers reported a 24-percent rise in profits.

Profits of 410 durable-goods companies rose 18 percent. The 435 nondurable-goods and service companies included in the sample increased their aggregate 1941 profits by 16 percent.

A few groups, notably electrical equipment and aircraft transportation, registered net profits which were at about the same level as in 1940. Profits of the telephone and tobacco companies included in the sample were not quite as large as in 1940.

Comparison with 1937.—The largest increases in earnings in 1941 as compared with 1937 occurred in industries most directly affected by the war. Thus, profits of 13 companies manufacturing airplanes advanced tenfold, while 4 shipbuilding companies, which in 1937 had combined profits of only $100,000, last year reported profits of $10,000,000. Net profits of the steel companies covered in the sample were about 37 percent higher than in 1937. Among the nondurable-goods manufacturing industries, 23 clothing and apparel companies more than doubled their combined 1937 profits, and the net earnings of the leather and shoe and rubber manufacturing groups were almost twice as great in 1941 as in 1937. On the other hand, a few industry groups, notably the petroleum and metal and glass container industries, had lower aggregate net profits in 1941 than in 1937.

Net profits in 1941 and 1940

[Compiled by Federal Reserve Bank of New York]

Corporation groups	Number of companies	1941	1940
		Millions of dollars	*Millions of dollars*
Total	1, 128	3, 729. 3	3, 013. 2
Advertising, printing, and publishing	13	18. 8	17. 8
Aircraft manufacturing	13	65. 4	42. 5
Automobiles	13	260. 1	240. 5
Auto parts and accessories	53	81. 0	65. 2
Building materials	69	116. 2	102. 7
Chemicals	35	193. 9	180. 2
Containers (metal and glass)	8	40. 8	39. 0
Copper and brass fabricators	8	17. 5	12. 0
Drugs, cosmetics, and soap	20	70. 8	60. 9
Electrical equipment	32	131. 8	131. 7
Food products	74	227. 5	201. 6
Household supplies	35	34. 7	31. 1
Leather and shoes	11	8. 4	4. 8
Machinery and accessories	112	213. 6	160. 2
Mining	54	205. 4	184. 7
Motion pictures	7	16. 0	13. 0
Paper and paper products	34	37. 2	29. 0
Petroleum	42	209. 4	134. 3
Public utilities (*net income*)	59	264. 5	253. 6
Railroad equipment	18	47. 9	36. 9
Retail trade	60	180. 7	170. 5
Rubber and tires	9	49. 7	38. 9
Shipbuilding	4	10. 0	8. 9
Steel and iron	54	335. 9	289. 4
Telephone (*net income*) [1]	33	196. 0	202. 0
Textiles	54	51. 3	34. 9
Tobacco	18	83. 4	93. 8
Transportation:			
Aircraft	6	4. 3	4. 3
Railroads, class I (*net income*)	137	501. 7	185. 1
Shipping	5	9. 9	6. 4
Miscellaneous	38	45. 5	37. 3

[1] *Excludes dividends received by American Telephone & Telegraph Co.*

Business and Economic Conditions in February 1942

National Income.—Income payments in February 1942 totaled 7,950 million dollars, according to the Department of Commerce. This compares with 8,420 million dollars in the preceding month and 6,450 million dollars in February 1941.

Farm Income.—February cash income of farmers including Government payments aggregated 887 million dollars, as against 1,098 million dollars in January and 632 million dollars in February a year ago.

Bituminous Coal.—About 43,840,000 tons of bituminous coal were mined in February. Output totaled 48,540,000 tons in January and 41,700,000 tons in February 1941.

Building Construction.—The total value of building permits issued in 2,480 cities rose to approximately $258,200,000 in February, as against $170,260,000 in the preceding month. In February 1941 these same cities issued permits valued at $189,230,000.

Cotton Consumption.—Textile mills used more than 893,700 bales of cotton in February. This was slightly less than the 946,000 bales consumed in the preceding month but was considerably above the 793,400 bales used in February of last year.

Electric Power.—Output of electric power for public use in February totaled 13,810 million kilowatt-hours—1,540 million kilowatt-hours less than in January, but 3,330 million kilowatt-hours more than in February 1941.

Railroad Freight-Car Loadings.—On the average, class I railroads hauled 780,700 cars of freight per week in February. This was slightly higher than the 771,700 cars per week reported for the preceding month and substantially above the 716,600 cars per week in February a year ago.

Steel—About 6,525,000 tons of steel ingots were produced in February, compared with 7,129,000 tons in the preceding month and 6,238,000 tons in February 1941.

Trend of Industrial Production

Further advances in output of durable-goods industries brought the Federal Reserve Board's seasonally adjusted index of industrial production for February to a point 20 percent above February a year ago and 73 percent above the level of the 5 years 1935–39. Production of nondurable-goods industries and of mines continued at the relatively high levels reached last autumn.

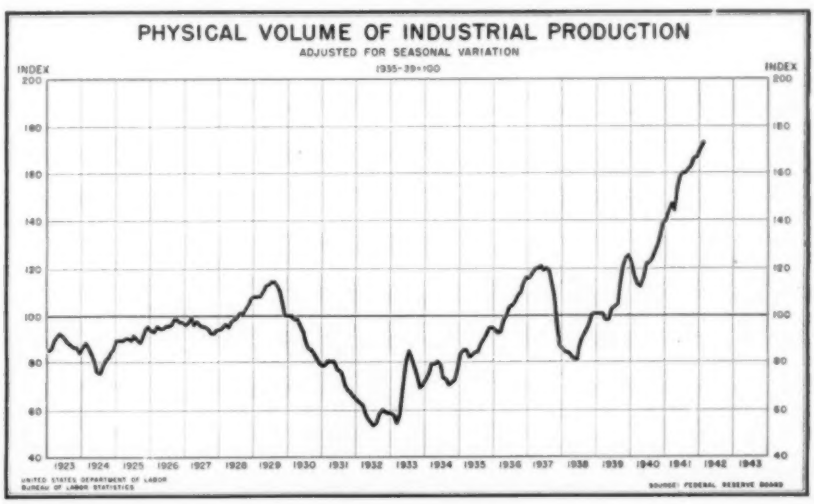
In the machinery and transportation-equipment industries, now primarily engaged in armament production, activity continued to advance rapidly. Output of cotton-textile mills and chemical factories rose again in February, also largely as a result of military orders. Meat-packing establishments reported little change in activity from the high rate reached in January.

Industrial Production
Adjusted Index

1935–39=100

1942	
February	[1] 173
January	171
1941	
December	168
November	166
October	163
September	161
August	160
July	160
June	159
May	154
April	144
March	147
February	144

[1] *Preliminary.*



Employment and Pay Rolls in February 1942

Further seasonal reductions in employment in wholesale and retail trade, private construction, mining, and transportation and public utilities more than offset the small gains in employment in manufacturing and in Federal, State, and local Government services. As a result, total nonagricultural employment of 39,840,000 in February was 29,000 smaller than in the preceding month. It was, however, nearly 2,400,000 larger than in February 1941.

PRIVATE EMPLOYMENT

Manufacturing.—Due primarily to problems of plant conversion and scarcity of raw materials, the February upturn in factory employment was not as pronounced as usual. In durable-goods industries, employment increases of 37,900 in machinery manufacturing and 2,700 in nonferrous metals more than offset slight declines in the remaining durable-goods groups, and employment for the group as a whole advanced 7,000. In the nondurable-goods industries combined, approximately 36,000 more workers were employed in February than in the preceding month. Seasonal gains occurred in such industries as women's clothing, men's clothing, leather boots and shoes, cotton goods, fertilizers, and cigars and cigarettes. Restrictions on the use of raw materials affected the rate of activity in the manufacture of woolen and worsted goods, carpets and rugs, rubber tires and tubes, and hosiery, where employment reached the lowest level since January 1934.

Total weekly payments to employed factory workers rose $6,375,000, or about 2 percent in February. They were 39.5 percent higher than in February 1941. Based on the 1923–25 average as 100, the Bureau of Labor Statistics pay-roll index stood at 176.9 in February, as against 173.5 in January and 126.8 in February 1941. The employment index shows that for every 1,000 workers employed in manufacturing industries during 1923–25, 1,329 were so employed in February 1942, as against 1,324 in the preceding month.

Nonmanufacturing.—Among the mining industries slightly larger than seasonal decreases in employment occurred in crude-petroleum producing and quarrying and nonmetallic mining. Anthracite and bituminous-coal mines also employed fewer workers. Employment in metal mines rose slightly, but for the mining group as a whole approximately 17,000 fewer workers were employed than in January.

Retail dealers in the automotive field reported a substantial decrease in employment, and for the wholesale and retail trade group as a whole, employment declined by 65,000 during the month. Fewer workers were also employed in the telephone and telegraph and the electric light and power industries. Street railway and bus companies re-

Factory Employment Index

1923–25 = 100

1942	
February	[1] 132.9
January	132.4
1941	
December	134.3
November	134.8
October	135.4
September	135.2
August	133.1
July	130.6
June	127.9
May	124.9
April	122.6
March	119.9
February	117.8
January	115.5

[1] Preliminary.

ported a slight rise in employment, but total employment for the transportation and public utility group was 9,000 smaller than in January. Adverse weather conditions in some sections of the country largely accounted for a drop in employment of 26,000 building-trades workers in private construction.

PUBLIC EMPLOYMENT

Federal work relief programs in February continued the curtailment in activities which started a year ago. Over the month interval, January to February, employment declined 43,700 in N. Y. A. student work programs, 7,400 in N. Y. A. out-of-school programs, and 9,200 in the Civilian Conservation Corps. The W. P. A., however, reported an increase of 4,900 workers.

C. C. C. and N. Y. A.—Employment in the Civilian Conservation Corps declined to 130,300 in February, compared with 312,000 a year ago. Wage payments to enrolled workers, camp supervisors, and instructors totaled $6,390,000 this February, as against $13,730,000 in the corresponding month of 1941. N. Y. A. projects in February employed 493,100 boys and girls, whose total earnings for the month amounted to approximately $7,270,000.

Federal Service.—Of the 54,300 employees added to the staff of the executive branch of the Federal Government in February, 9,900 were located in the District of Columbia and 44,400 were assigned jobs in other parts of the country. Total employment in the executive branch rose to 1,757,000 in February. The legislative branch employed 6,300 persons, and the judicial branch 2,600.

Construction Projects.—Employment and earnings in construction projects financed wholly or in part from Federal funds in February were:

Project	Employment	Earnings
All construction projects	1, 171, 900	$199, 146, 000
Regular Federal Government appropriations	1, 106, 500	188, 850, 000
Reconstruction Finance Corporation	37, 000	6, 580, 000
U. S. Housing Authority	25, 300	3, 375, 000
Public Works Administration	2, 000	238, 000
Defense Public Works	1, 100	103, 000

Work Projects.—February employment on projects of the Work Projects Administration totaled 1,028,600. Of this number it is estimated that 327,800 were employed on defense projects. Total pay rolls for the month aggregated $58,600,000. A year ago, W. P. A. projects provided jobs to 1,960,000 persons who earned $216,000,000.

Estimated employment and pay rolls in manufacturing industries

[February 1942, January 1942, and February 1941]

Industry	Number of workers employed			Amount of weekly pay roll		
	February 1942 [1]	January 1942 [2]	February 1941	February 1942 [1]	January 1942 [2]	February 1941
All industries [3]	**10, 489, 700**	**10, 446, 700**	**9, 296, 600**	**$335, 620, 000**	**$329, 247, 000**	**$240, 631, 000**
Durable-goods groups [3]	*5, 529, 700*	*5, 522, 700*	*4, 660, 000*	*208, 903, 000*	*205, 096, 000*	*139, 555, 000*
Iron and steel	1, 217, 200	1, 222, 600	1, 115, 500	45, 502, 000	44, 432, 000	34, 823, 000
Machinery	1, 678, 000	1, 640, 100	1, 270, 200	70, 246, 000	67, 917, 000	42, 148, 000
Transportation equipment	1, 165, 300	1, 183, 000	885, 800	55, 843, 000	56, 570, 000	32, 871, 000
Nonferrous metals	362, 700	360, 000	335, 900	13, 193, 000	12, 967, 000	9, 922, 000
Lumber	669, 800	673, 100	654, 800	15, 529, 000	14, 966, 000	12, 917, 000
Stone, clay, glass	326, 000	333, 300	304, 500	9, 195, 000	8, 838, 000	7, 279, 000
Nondurable-goods groups [3]	*4, 960, 000*	*4, 924, 000*	*4, 636, 600*	*126, 717, 000*	*124, 151, 000*	*101, 076, 000*
Textiles	1, 838, 400	1, 805, 400	1, 793, 200	40, 275, 000	37, 955, 000	32, 890, 000
Leather	328, 100	319, 700	313, 500	8, 010, 000	7, 488, 000	6, 392, 000
Food	882, 400	898, 400	791, 600	22, 688, 000	23, 452, 000	18, 143, 000
Tobacco	90, 800	87, 800	88, 200	1, 612, 000	1, 618, 000	1, 372, 000
Paper and printing	657, 100	662, 200	621, 900	20, 136, 000	20, 288, 000	17, 407, 000
Chemicals	506, 600	495, 100	425, 800	17, 238, 000	16, 738, 000	11, 998, 000
Rubber	132, 800	133, 900	135, 200	4, 283, 000	4, 370, 000	3, 999, 000
Unclassified	523, 800	521, 500	467, 200	12, 475, 000	12, 242, 000	8, 875, 000

[1] *Preliminary.* [2] *Revised.*

[3] *Major groups adjusted to 1939 Census of Manufactures. Because the subgroups have not been similarly adjusted, and because of overlapping, the totals of the subgroups under durable goods do not agree with the total for the group as a whole.*

Hours of Work and Earnings in Manufacturing Industries

The average workweek in manufacturing industries continued to rise in February. For all employed factory workers combined, the average of 42 hours per week was about ½ hour per week longer than in January and more than 2 hours per week longer than in February 1941. Average hourly earnings of 80½ cents was approximately the same as in the preceding month and 11½ cents an hour higher than in February a year ago. Weekly earnings in February averaged $35.75—65 cents per week more than in January and $6.90 per week more than in February of last year.

In the five selected durable- and nondurable-goods manufacturing industries, average weekly hours of work and average hourly and weekly earnings in February 1942 were:

Durable-goods manufacturing

Weekly hours:
- 47.5 in aircraft.
- 47.5 in foundries and machine shops.
- 40.5 in blast furnaces and rolling mills.
- 40.0 in sawmills.
- 38.5 in brick manufacturing.

Hourly earnings:
- $0.99 in blast furnaces and rolling mills.
- $0.95 in aircraft.
- $0.88 in foundries and machine shops.
- $0.67½ in brick manufacturing.
- $0.58½ in sawmills.

Weekly earnings:
- $44.80 in aircraft.
- $42.00 in foundries and machine shops.
- $40.20 in blast furnaces and rolling mills.
- $26.10 in brick manufacturing.
- $23.30 in sawmills.

Nondurable-goods manufacturing

Weekly hours:
- 43.5 in paper and pulp.
- 41.0 in cotton-goods manufacturing.
- 39.5 in boots and shoes.
- 39.0 in petroleum refining.
- 39.0 in slaughtering and meat packing.

Hourly earnings:
- $1.10½ in petroleum refining.
- $0.78½ in slaughtering and meat packing.
- $0.76½ in paper and pulp.
- $0.63 in boots and shoes.
- $0.51 in cotton-goods manufacturing.

Weekly earnings:
- $42.65 in petroleum refining.
- $33.30 in paper and pulp.
- $30.70 in slaughtering and meat packing.
- $25.10 in boots and shoes.
- $20.80 in cotton-goods manufacturing.

Employment, Pay Rolls, Wages, and Hours, in Selected Nonmanufacturing Industries

Item	February 1942 [1]	Increase or decrease	
		January 1942 to February 1942	February 1941 to February 1942
Retail trade		*Percent*	*Percent*
Employment	3,611,200	−1.3	+4.0
Weekly pay roll	$81,957,000	−1.3	+10.5
Weekly hours	42.5	+.1	−1.4
Hourly earnings	$0.60	+.3	+8.2
Weekly earnings	$23.65	[2]	+6.3
Wholesale trade			
Employment	1,513,500	−.7	+3.1
Weekly pay roll	$53,951,000	+1.5	+14.5
Weekly hours	41.5	+1.1	+2.2
Hourly earnings	$0.84	+1.0	+7.9
Weekly earnings	$34.60	+2.2	+11.1
Bituminous coal			
Employment	433,000	−.7	+4.2
Weekly pay roll	$13,066,000	+1.0	+30.2
Weekly hours	31.5	+.5	+4.5
Hourly earnings	$1.07	+1.2	+19.3
Weekly earnings	$33.30	+1.7	+24.9
Metal mining			
Employment	88,800	+.1	+10.0
Weekly pay roll	$3,230,000	+4.4	+37.3
Weekly hours	44.5	+3.3	+7.8
Hourly earnings	$0.87	+1.0	+15.5
Weekly earnings	$38.65	+4.3	+24.8
Telephone and telegraph			
Employment	452,300	−.8	+10.9
Weekly pay roll	$15,241,000	−.1	+15.9
Weekly hours	39.5	−1.3	+.5
Hourly earnings	$0.83	+2.0	+3.8
Weekly earnings	$32.90	+.7	+4.4
Power and light			
Employment	248,600	−1.5	+.6
Weekly pay roll	$9,410,000	−1.2	+7.3
Weekly hours	40.0	−.2	+.9
Hourly earnings	$0.94	+.7	+5.8
Weekly earnings	$37.60	+.4	+6.6
Street railways and busses			
Employment	197,800	+.2	+3.8
Weekly pay roll	$7,774,000	+3.8	+17.6
Weekly hours	48.0	+3.5	+5.0
Hourly earnings	$0.79	+.3	+7.7
Weekly earnings	$38.65	+3.5	+13.3
Hotels			
Employment	274,900	+.1	+.4
Weekly pay roll	$4,567,000	+.7	+7.0
Weekly hours	45.5	−.6	[2]
Hourly earnings	$0.37	+1.6	+7.3
Weekly earnings	$16.80	+.6	+6.6
Laundries			
Employment	248,200	−1.2	+6.3
Weekly pay roll	$4,449,000	−1.5	+14.0
Weekly hours	43.0	−.4	−.9
Hourly earnings	$0.46	[2]	+7.9
Weekly earnings	$19.85	−.3	+7.3
Dyeing and cleaning			
Employment	64,200	−.2	+8.1
Weekly pay roll	$1,239,000	−.8	+15.4
Weekly hours	41.5	−.6	−1.1
Hourly earnings	$0.54	+.6	+8.8
Weekly earnings	$21.80	−.6	+6.7

[1] *Preliminary.* [2] *No change.*

Cost of Living in March 1942

Between the middle of February and the middle of March average living costs for wage earners and lower-salaried workers in large cities rose 1.2 percent. Since the outbreak of World War II the cost of living, averaged for the 34 large cities regularly covered by the Bureau of Labor Statistics, has increased about 16 percent.

Retail food costs advanced in all of the cities covered by the Bureau of Labor Statistics survey. Prices of pork, fruit, and canned vegetables rose sharply. Butter and eggs were seasonally lower, and several fresh vegetables also dropped as new supplies came on the market. However, the family food bill, on the average, increased 1.5 percent from February to March.

EFFECT OF WAR ON INDEX

In normal times, when price changes are comparatively small and are more or less evenly distributed throughout the country, there is very little variation between the month-to-month changes in the total cost of living index and the changes in the indexes of the 34 separate cities which are used to make up the total. It is true that even in normal times local and seasonal factors may cause some prices to rise in certain sections of the country while remaining stable or even declining in other sections. Such changes, however, are, as a rule, rather small and do not affect the representativeness of the cost of living index for the country as a whole.

The large increases in wholesale and retail prices since the beginning of the war in September 1939 and the large concentration of war-production activities in certain parts of the country has greatly widened the spread between the changes indicated by the total cost of living index for the country as a whole and the changes which have actually occurred in the different cities. For instance, during the nearly 2½-year period from August 1939 through December 1941, the cost-of-living index for the 34 cities combined which are covered by the Bureau of Labor Statistics increased 12.1 percent. An examination of the changes in the cost of living which were registered in the separate cities during the same period show that in some of these cities the cost of living has risen considerably less and in other cities considerably more than indicated by the average for the 34 cities combined.

In New York City the cost of living index has advanced less than 10 percent. In Kansas City, Houston, Denver, Minneapolis, Philadelphia, Washington, D. C., Boston, Los Angeles, and Portland, Maine, the advance during the same period was less than 12 percent. In contrast with these cities, Mobile, Ala., registered during the same period an advance in the cost of living of 18 percent; Norfolk, 17.9 percent; Jacksonville, Fla., 16.0 percent; Birmingham, Ala., 15.6 percent; Indianapolis, 15.6 percent; and Buffalo, 15.0 percent. Increases of between 13 and 15 percent were recorded in Savannah, Ga., Seattle, Detroit, Baltimore, New Orleans, Portland, Oreg., Memphis, Cincinnati, Cleveland, and Manchester, N. H. In other words, while the changes in the total cost of living index for the large cities combined published by the Bureau of Labor Statistics indicate the general trend in the total costs of the goods and services purchased by wage earners' families, they do not necessarily measure precisely the changes in the cost of living that have occurred in any particular city or community.

Small Cities.—It is also important to emphasize that the Bureau of Labor Statistics regular cost of living index covers large cities only. Again, in normal times there may be only a comparatively small variation between the changes in the cost of living in large cities and the corresponding changes in smaller communities. This situation, too, has been considerably modified as a result of the war. A study by the Bureau of Labor Statistics of the changes in the cost of living in 11 small cities shows an average increase in the cost of living in these towns between June 1939 and December 1941 of 13.7 percent, but this average is again not strictly representative of any of the small cities covered in the study. In some cities, for instance Bloomington, Ind., Oswego, N. Y., Vineland, N. J., and Walla Walla, Wash., the increases in the cost of living were substantially lower than the 13.7 percent average for the 11 cities. On the other hand, during the same period, Chester, S. C., registered an increase in the cost of living of 16.5 percent: Clinton, Iowa, 15.9 percent, Battle Creek, Mich., 15.7 percent and Lebanon, Pa., 14.6 percent.

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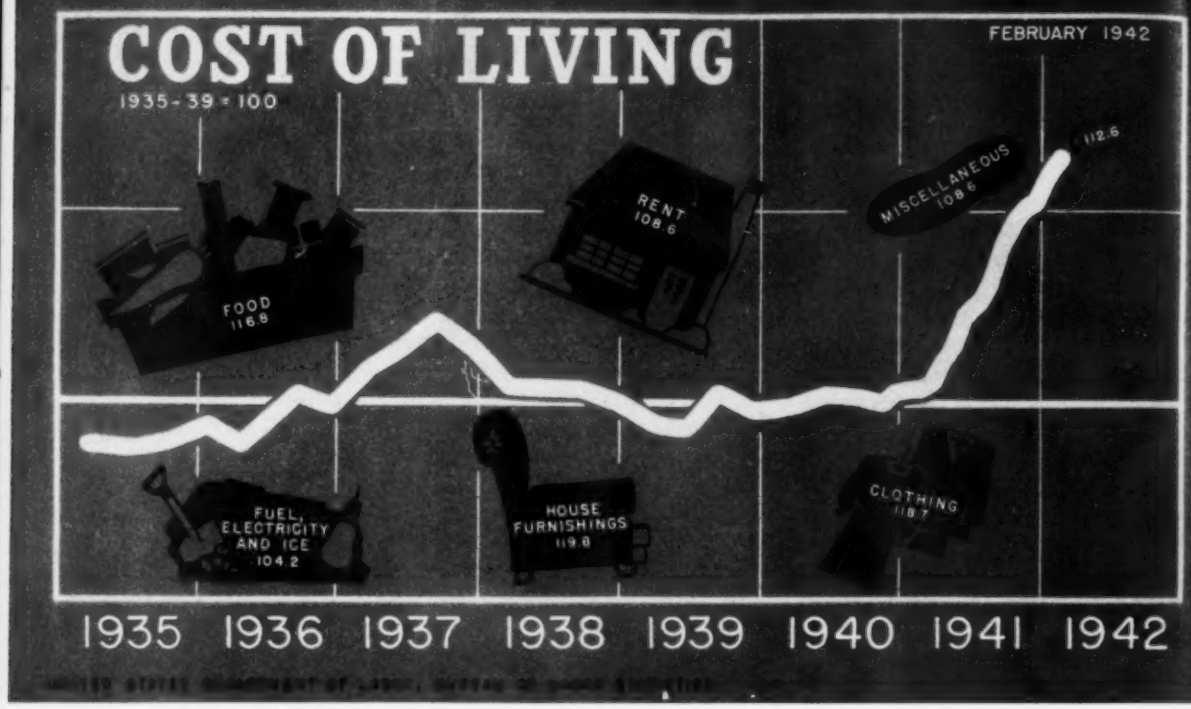

Defense Cities.—A special survey by the Bureau of Labor Statistics of the changes in the cost of living of five defense cities indicates that in such areas the advance in the cost of living was greater than in cities with a smaller amount of war production activities. Between October 1939 and January 1942, the cost of living advanced 17.4 percent in Gadsden, Ala., 16.8 percent in South Bend, Ind., 16.7 percent in San Diego, Calif., 14.8 percent in Bridgeport, Conn., and 14.5 percent in Corpus Christi, Tex. These increases in the cost of living in the five defense cities are more in line with the cost of living advances in such important large cities as Seattle, Birmingham, Mobile, and Detroit than with the average increase for the 34 large cities regularly covered in the Bureau of Labor statistics cost of living index. In other words, while the effect of the war has been to raise the cost of living for the country as a whole, the increase has not been uniform. By and large, the metropolitan cities have been relatively less affected by the expansion of war industries, and the advance in the cost of living in these cities has been relatively slow. The steepest advances occurred in the moderate and smaller cities with the greatest expansion of war production activities.

Cost of living in 21 large cities

Area and city	Index as of March 15, 1942 (1935-39=100)	Percentage increase—		
		Feb. 15, 1942, to March 15, 1942	March 15, 1941, to March 15, 1942	Aug. 15, 1939, to March 15, 1942
Average for 34 cities	114.3	1.2	12.9	15.9
North Atlantic:				
Boston	111.6	.5	12.2	14.9
Buffalo	117.8	1.4	14.6	19.6
New York	112.0	.9	10.3	13.1
Philadelphia	112.8	1.4	13.3	15.3
Pittsburgh	113.8	.9	12.2	15.7
South Atlantic:				
Baltimore	116.7	1.6	15.0	18.2
Savannah	118.4	1.5	16.5	19.2
Washington, D. C.	113.5	1.4	12.5	15.1
North Central:				
Chicago	113.7	1.2	12.0	15.2
Cincinnati	114.4	1.6	13.8	17.6
Cleveland	117.0	1.6	13.7	17.0
Detroit	117.1	1.5	14.7	18.9
Kansas City	112.9	1.6	13.8	14.5
Minneapolis	114.3	1.4	11.9	14.6
St. Louis	114.8	1.7	13.6	17.0
South Central:				
Birmingham	117.3	.8	15.5	19.1
Houston	115.3	1.1	12.7	14.5
Western:				
Denver	113.2	1.3	13.3	14.8
Los Angeles	116.5	1.7	13.7	15.9
San Francisco	115.7	1.3	13.0	16.5
Seattle	119.6	1.4	16.1	19.2

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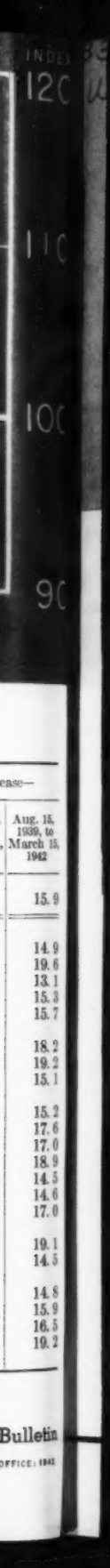

ease—	
	Aug. 15, 1939, to March 15, 1942
	15.9
	14.9
	19.6
	13.1
	15.3
	15.7
	18.2
	19.2
	15.1
	15.2
	17.6
	17.0
	18.9
	14.5
	14.6
	17.0
	19.1
	14.5
	14.8
	15.9
	16.5
	19.2

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